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ABSTRACT

Fignting behavior in young children was investigated in a sample of 96 first- and second-grade children from 14 classrooms in two suburban schools. A fight (or "conflict episode") was defined as a sequence of interchanges between two children in which child A attempts to influence child B's behavior, child B resists, and child A persists. Six specific questions addressed in the study concerned possible correlates of a child's rate of participation in dyad fights during free play: that is to say, they related to how high-rate fighters differ from low-rate fighters in terms of number of children fought with, range of behavior exhibited during fights, relative success at fighting, and extent of popularity with peers. Once a week for 10 consecutive weeks, subjects divided into eight same-sex, grade-balanced groups met for 1 hour of free play with various age-appropriate toys. Their behavior was videorecorded and monitored by two graduate students. Dyadic conflict episodes were identified and the nature of the outcome, identity of the winner/loser, behaviors occurring during the course of each fight, and the type of issue fought over were coded. Before and after the playgroup experience, subjects were interviewed to determine the sociometric status of members in each group. Results of a correlational analysis are consistent with the hypotheses that a high level of fighting contributes to unpopularity and that unpopularity may contribute to the tendency to fight. (RH)

Correlates of Fighting in First and Second Grade Children: A Naturalistic Study

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Anyone who has spent much time observing children playing together is aware of the fact that one of the things they do a lot is fight. They fight over such things as the use of a particular toy; who gets the last chair at the table; who will go and fetch some more sand; and whose interpretation of the rules of the game is correct. The project of which this study is a part is based on the assumption it is important to better understand these kinds of interactions, not just because they are pervasive, socially-salient phenomenon in their own right, but because of the potential that a better understanding of children's fighting behavior may have for enhancing our understanding of social-personality development more generally. What a child fights about, the types of behaviors he/she uses during fights, and the outcomes children achieve during fights may not only reveal important underlying personality patterns, these experiences may also significantly shape the child's social-personality development through a variety of important mechanisms. For a given child, for example, some ways of fighting may be consistently rewarded, while other fighting tactics are consistently punished. Or to take another example, how a child fights, and his/her relative success at fighting may influence the child's popularity and/or unpopularity within the group, which in turn may have important implications for subsequent social/personality development.

Before turning to a discussion of the specific questions addressed in this study, a few words should be said about what we mean fy a fight. Essentially, we refer to a contest, or conflict, or a disagreement between two parties; an interaction in which the parties strive to achieve their own interests. More operationally, we identify a fight or conflict episode as a sequence of interchanges between two children in which

child A attempts to influence the behavior of child B, child B resists this influence, and child A makes a subsequent influence attempt. It should be noted that for us, a conflict episode or fight is not synonymous with an exchange of aggressive acts. We view these concepts as being conceptually independent, thus fights may or may not involve aggressive acts, and aggressive interchanges may or may not occur within the context of a fight or conflict.

Turning now to the specific questions addressed in this study: They are six in number, and are all concerned with possible correlates of a child's rate of participation in dyad fights during free-play. That is to say, with how high-rate fighters differ from lower-rate fighters in terms of the number of children they fight with, the range of behavior they exhibit during fights, their relative success at fighting and in their popularity, or lack thereof, with their peers. For purposes of clarity and economy of time we will defer a discussion of the theroetical and practical significance of these questions until later in the presentation.

The first question addressed is concerned with how children who have a large number of fights per session distribute their fights across the members of the group. Do high-rate fighters fight with a greater number of different children than low-rate fighters? Or do they, instead, focus on a relatively few targets, but then have significantly more fights with each partner than low fight-rate children?

The second question is concerned with the range of different behaviors or tactics high- and low-rate fighters use while fighting. That is to say, do high-rate fighters differ from low-rate fighters in the variety of tactics they exhibit during a fight?

The third question involves the relationship between fighting and aggression. Do children who fight a lot use a greater proportion of aggressive acts in their fights than do children who are less inclined to fight?

The fourth question addresses the relationship between a child's rate of fighting, and his/her degree of success at fighting. Specifically, do children who fight a lot win a higher percentage of their fights than do children who fight less frequently?

The fifth question concerns the relationship between fighting and sociometric status. Do high-rate fighters differ from low-rate fighters in terms of the number of children who like and dislike them? Are these relationships influenced by whether one uses sociometric status obtained at the start, as opposed to the end, of the ten weeks of play-session?

Finally, the sixth question concerns the issue of gender differences. Specifically, do the above relationships vary as a function of whether the group is made up of boys or girls?

Method

Subjects

The study was conducted with a sample of children from a population that has not been studied naturalistically as frequently as some other groups; specifically, early elementary school age children. A sample of 96 children was randomly selected from among first- and second-grade children who wished to participate and whose parents consented. The children came from 14 different classrooms in two suburban schools which served lower class to upper-middle class, predominately white, neighborhoods.

The 48 children from each school were randomly assigned to one of four after-school, free-play groups to form at each school two male play-groups each having six first-grade and six second-grade boys, and two play-groups of girls equally drawn from first- and second-grades. The only limitation on randomization was that no more than three children in a group came from the same classroom.

Procedure

Behavior observations. Once a week each of the eight groups met after school in their own school library for one hour of free-play, for 10 consecutive weeks. Each area (10.53 m x 10.53 m) had two round tables (1.8 m diameter) and four chairs, and two open areas of 1.8 m square. A wide variety of age-appropriate toys were randomly placed in the four areas at the beginning of each session, using the same toys for each group and a few additions and deletions each week for novelty. Two graduate students were present at all times to monitor the activity and the videotape equipment; they did not direct or take part in the activity. Two video-tape cameras at diagonal ends of the room and microphones located at each table and open areas permitted a complete visual and auditory record of the groups' play.

Coding behavior. The data base for this study is 72 hours, nine hours of play for each group (the first session was excluded). First, dyadic conflict episodes were identified by teams of observers. Conflict was defined as any sequence in which Child A attempted to influence B's behavior, Child B resisted, and Child A persisted. Each episode of conflict was recorded for the nature of the outcome (clear winner, loser, stalemate, outside intervention, compromise), and the identity of the

winner/loser. The behaviors that occurred during the course of each fight were coded using an a priori, mutually exclusive set of 38 categories. These categories included such things as verbal aggression, physical aggression, requests, commands, appeals to principles, physical destruction, ignoring, assertions, etc.

Each conflict was then coded for the type of issue the children were fighting about. The five types coded were object conflicts, space conflicts, control of the other's behavior, changing the other's ideas, and physical contact.

Rater-reliability coefficients were calculated for all of the above decisions on eight separate occasions and in such a way that raters never knew which of their coding decisions would be checked. The coefficients (number of agreements divided by the total number of agreements plus disagreements) averaged .80 or higher for the identification of conflict episodes, and for coding the issues fought over, the types of fight outcomes, and the specific behaviors exhibited by each participant.

Assessment of Sociometric Studies

Both before and after the 10-week free-play period all children were interviewed to determine the sociometric status of the children in each group. On both occasions each child was shown pictures of the other members of his/her group, and asked to point out the children they knew. They were then asked to identify the three children they liked the most, and three children they disliked the most. Two types of scores were then generated for each child. The first consisted of the number of the children in the group who named S as one of the three children in the group they liked most (the "liked" score). The other indicated the

number of children in the group who named S as one of the three children they disliked the most (the "disliked" score). These scores could range from 0 to 11. Since these assessments were done both before and after the free-play experience, both pre- and post-sessions liked and disliked scores were obtained for each child.

Results and Discussion

1. Do high- and low-rate fighters differ in how they distribute their fights across the members of the group?

This question was assessed by computing the mean number of fights per session each child exhibited; the mean number of different children each child fought with per play-session; and the mean number of fights each child had per partner per session. These three scores were then intercorrelated for boys, for girls, and for all the children. The relevant Pearson product-moment correlation presented in Table 1 indicate that a child's rate of fighting was positively related both to the number of different partners he/she fought with in a typical session, and to the mean number of fights per partner, r (94) = .65, $p < .001$; r (94) = .82, $p < .001$, respectively. These relationships applied equally to both boys and girls.

It would appear that children who fight a lot are just generally more contentious than children who fight less frequently. Not only do they fight more frequently with their partners, they also fight with more partners. A post-hoc analysis also indicated that a child's rate of fighting was unrelated to the percentage of fights in which she/he was trying to get something from the other child versus the percentage of fights in which he/she was resisting the other child's efforts to get something from them.

Taken together, these results suggest that children who fight a lot differ from low-rate fighters in terms of their position on a dimension of general "contentiousness." That is to say, high-rate fighters appear both less likely to "give up" when trying to influence another child than low-rate fighters, and less likely to "give in" when another child is trying to influence them. This general "contentiousness" is also reflected in the fact that they disperse their conflicts broadly across the group, rather than focusing unduly on a limited number of targets. This characterization must, of course, be viewed as an hypothesis requiring further testing, since it requires within-subject comparisons to adequately assess, not just the between-subject analysis presented here.

2. Is rate of fighting related to the range of different kinds of behavior exhibited during fights?

One might expect one of the reasons some children engage in a large number of conflicts is because they have too limited an array of behaviors for getting others to do what they want without fighting. Low-rate fighters, on the other hand, may not fight so frequently because they have a more diverse and flexible array of behaviors for influencing others. To the extent this is the case, one might predict that when high-rate fighters become involved in a conflict, they tend to use fewer different types of behavior in attempting to resolve the conflict than low-rate fighters. This possibility was assessed by calculating the relationship between rate of fighting and the mean number of different types of behavior exhibited during fights. The fact that this analysis yielded a significant positive relationship for children overall (r (94) =

.22, $p < .01$) is clearly contrary to this expectation. Rather than showing fewer types of behaviors per fight, both boys and girls who fight a lot tend to use a greater variety of behaviors during fights than do low-rate fighters. Thus, it would appear that when high-rate fighters try to influence the other child during a fight, and their action does not terminate the fight, they are more likely than low-rate fighters to switch to another type of behavior. Whether this represents a more admirable level of flexible adaptiveness on the part of high-rate fighters, or a more random and wide-ranging search for an effective solution, will of course require further research.

3. Is rate of fighting related to the use of aggressive behavior during fights?

Although, as was mentioned earlier, fighting and aggressive behavior are conceptually independent, there is a wide-spread assumption they are empirically related. That is, that children who get into many conflicts are also likely to exhibit a lot of aggressive behavior. This relationship was examined by correlating mean number of fights per session with the child's mean percentage of conflict acts categorized as physical aggression, and the mean percentage of acts coded as verbal aggression. Pearson product-moment correlations for the children as a whole indicate a significant positive relationship for physical aggression (r (94) = .67, $p < .001$), but no relationship for verbal aggression (r (94) = .03, n.s.). It would appear that the wide-spread expectation is correct, at least as far as physical aggression is concerned. Both boys and girls who fight a lot do in fact show a higher percentage use of physical aggression while fighting than do children who fight less frequently.

It should be noted here that the fact that physical and verbal aggression show a different pattern of correlates, both in this study and others (Shantz & Shantz, 1982), suggests it may be important to maintain these two as separate categories of behavior when studying children rather than lumping them into a general aggression category.

4. Is rate of fighting related to rate of winning and other fight outcomes?

It might be expected that some children are contentious and fight a lot because they have learned this is a good way of getting their own way. If this were true, one would expect rate of fights to be positively related to the percentage of fights the child won. The data, however, do not support this expectation. For these children, there is absolutely no relationship between how much a child fights and his/her likelihood of winning, r (94) = -.00, n.s. There is, however, a marginally significant relationship between a fight-rate and percentage of loses, r (94) = -.15, $p < .07$. Children who fight a lot tend to lose less than children who fight less frequently. Finally, the relationship between rate of fighting and percent of stalemates vary depending on the child's gender. For boys, a higher-rate of fighting is related to a higher percentage of stalemated conflicts, r (47) = .43, $p < .001$. For girls, however, there is no relationship between these two variables, r (47) - .06, n.s.

Taken together then, these findings may suggest that boys who fight a lot differ from boys who fight less frequently, not in the degree to which they expect they can increase their likelihood of getting their own way by fighting, but in the extent to which they feel they can decrease their chances of losing by pursuing the conflict to a stalemate. Again, however, this hypothesis must be further evaluated by more detailed within-subject analysis.

5. Rate of fighting and sociometric status

It has been reported that children who are viewed as aggressive by their peers tend to be less popular than children who are not so aggressive (Goertzen, 1959; Gottman, 1977; Moore, 1967). Does this also apply to children who are contentious and engage in a lot of interpersonal conflict? If it does, which way does the causal direction flow? Do some children have to fight to get their way because they are unpopular, or does their level of contentiousness cause them to be unpopular? In order to obtain some information relative to these issues, we correlated rate of fighting with the child's two disliked scores, the one obtained prior to the start of the group session and the one obtained at the conclusion. The results indicate that, for children as a whole, there is a significant relationship between one's unpopularity at the start of the session, and one's subsequent rate of fighting. The more a child was disliked by the group members at the outset, the greater his/her subsequent rate of fights, r (94) = .46, $p < .001$. This may suggest that there is something about being unpopular that causes a child to fight more in order to get his way, perhaps because others are less inclined to cooperate and defer to his or her wishes without a struggle. Unfortunately, this interpretation is rendered somewhat problematic by the fact that in most of these groups many of the members were acquainted with most of the others prfor to the group sessions. Thus a child's initial unpopularity score may have been caused by peer reaction to his/her level of fights exhibited in interaction before the groups began meeting. Our data do, however, provide clear support for the idea that rate of fights may contribute to a child's unpopularity. The relationship between rate of fighting and disliked score at the end of the session was

quite a bit higher than the relationship obtained at the start of the session, r (94) = .46, $p < .001$, and r (94) = .61, $p < .001$, respectively. Such a finding suggests that children who started out being unpopular, and then fought a lot, tended to move up in the disliked distribution, while children who were less unpopular at the outset, and subsequently fought at a low rate, moved down in the disliked distribution. In other words, how much a child fights may in fact play a role in determining their level of unpopularity within the group. These results, then, are consistent with the hypothesis that level of fights contributes to one's unpopularity, and that one's unpopularity may in turn contribute to one's tendency to fight.

But what of the fact that use of physical aggression is related, not only to rate of fights, but also both the pre- and post-sessions dislike score, r (94) = .31, $p < .001$, and r (94) = .36, $p < .001$, respectively. Perhaps the relationship between fights and sociometric status is merely an artifact of the physical aggression-disliked relationship. To assess this possibility the relationship between fight-rate and disliked scores was recalculated, partialing out the percent physical aggression score. When this was done, the relationship between fight rate and both the pre- and post-sessions disliked scores remained significant, r (94) = .36, $p < .001$, and r (94) = .53, $p < .001$, respectively. Thus the relationship between fight-rate and unpopularity is not an artifact of the physical aggression-unpopularity relationship. In fact, when rate of fighting was partialed out of the physical aggression with disliked score relationship, percent use of physical aggression was no longer related to either the pre- or post-session disliked scores, r (94) = .02, n.s., and r (94) = .-.08, n.s., respectively. Thus the

results of this study indicate it is a child's degree of fighting or contentiousness that is the important correlate of his/her unpopularity, while the relationship between physical aggression and unpopularity is merely an artifact of the relationship between physical aggression and rate of fighting.

Finally, it should be noted that neither fight-rate nor percent use of physical aggression were related to a child's level of popularity within the group as reflected in either the pre- or post-session "liked" scores.

6. Gender differences

The most significant gender finding produced in this study is the fact that there weren't many. In fact, the only gender differences obtained was the fact that while high-fighting boys tended to have a higher percentage of stalemates than low-rate fights, there was no significant relationship between these variables for girls. The fact that gender does not appear to have as much significance for the study of fighting behavior as it does for the study of aggressive behavior reinforces the importance of viewing these two types of behavior as related but separate kinds of social behavior patterns.

In summary, the results of this study suggest it may be fruitful to assess the theoretical formulation that unpopular boys and girls may become broadly contentious, and find it necessary to fight more frequently, if not to increase their chances of winning, then at least to minimize their chances of losing. Unfortunately, this elected level of fighting, rather than their over-use of physical aggression, may add to their

unpopularity, thus setting the occasion for even more conflict, and even more unpopularity. If such a reciprocal mechanism does in fact prove to be operating with these children, efforts should be undertaken to understand how best to arrest this downward spiral; and move it in a more favorable direction.

References

Goertzen, S. M. Factors relating to opinions of seventh grade children regarding acceptability of certain behaviors in the peer group. Journal of Genetic Psychology, 1959, 94, 29-34.

Gottman, J. M. Toward a definition of social isolation in children. Child Development, 1977, 48, 513-517.

Moore, S. G. Correlates of peer acceptance in nursery school children. In W. W. Hartup & N. L. Smothergill (Eds.), The young child. Washington, DC: National Association for the education of Young Children, 1967.

Shantz, D. W., & Shantz, C. U. Conflicts between children and social-cognitive development. Presented at the annual meeting of the American Psychological Association, Washington, DC, 1982.

Table 1

Pearson Product-Moment Correlation Coefficients

	$\bar{X}$ # fts. per sess V1	$\bar{X}$ # diff types of behavior V2	% physical aggression V3	% wins V4	% losses V5	% stalemates V6	Pre-sess. liked score V7	Post-sess liked score V8	Pre-sess disliked score V9	Post-sess disliked score V10	$\bar{X}$ # Dif. partners V11	$\bar{X}$ # fts per partner V12
V1	X	.22**	.67***	-.00	-.15 p<.07	.43*** (boys) .06 (girls)	.06	.05	.46***	.61***	.65***	.82***
V2		X	.03	-.04	-.13	.32***	.13	.15	.09	.07	.13	.25**
V3			X	-.05	-.15 p<.07	.03	.16	.12	.31***	.36***	.45***	.47***
V4				X	-.58***	-.27**	-.07	.06	.00	-.09	-.02	-.01
V5					X	.00	-.07	-.08	.00	-.12	.09	-.19*
V6						X	.12	.07	-.13	.12	-.17*	.13
V7							X	.59***	-.33***	-.29***	-.07	.19*
V8								X	-.34***	-.94***	-.04	.11
V9									X	.52***	.48***	.19
V10										X	.48***	.39***
V11											X	.35***
V12												X

***p < .001, 2-tailed test

**p < .01, 2-tailed test

*p < .05, 2-tailed test

+p < .10, 2-tailed test